Remarks

Claims 6, 12 and 13 have been amended to attend to the 35 U.S.C. §112 objections raised by the Examiner. In addition, independent claim 13 has been amended to incorporate the subject matter of claim 15 indicated as being allowable thus placing claim 13 in order for allowance. Otherwise, the independent claims as currently pending are maintained since, in the applicant's view, these claims define an invention which is novel and non-obvious having regard to the prior art of record.

Applicant has considered carefully the Examiner's comments in the "Response to Arguments" section of the Office Action, but maintains as valid applicant's submission presented in the response of August 13th, 2004.

In order to place the Examiner's objections under both 35 U.S.C. 102 and 103 in context with respect to the currently pending independent claims, it is necessary to consider what Kodialam et al (US6538991) actually discloses and suggests.

Kodialam concerns a method of routing a new NTP (network tunnel path) request based on network topology (column 5, lines 13/14). This employs a constraint based method that determines a path, such as a LSP (label switched path), through a network for an NTP request (column 4, lines 51 to 56. Sources S1, S2 etc connected to edge nodes of the network generate new packets for new or currently provisioned LSPs that identify ingress-egress point pairs. The ingress points comprise the edge nodes to which sources S1, S2 etc delivers packets and the egress points comprise edge nodes to which destinations D1, D2 etc are connected to receive such packets (column 5, lines 51 to 64). Thus an ingress-egress point pair define a path across the network from an edge node servicing a source S1, S2 etc to an edge node servicing a destination D1, D2 etc. It will also be clearly understood from Kodialam that a path (LSP, NTP) comprises a serial concatenation of links between adjacent nodes. It will also be clearly understood by a skilled

addressee that a link is a network connection between two adjacent nodes but that a path is a concatenated series of links between a series of adjacent nodes. By consequence, an LSP for an NTP must comprise an edge to edge (end to end) path across the network and this limitation of the teaching of Kodialam is more apparent from the following.

In Kodialam, a request for a NTP arrives at the network to provision and route a path between an ingress point and an egress point (column 6, lines 18/19). Thus, it follows that a request is for an end to end path between an edge node servicing a source and an edge node servicing a destination. Routing in accordance with the teaching of Kodialam evaluates the requested LSP (for the NTP) for a set of potential paths between ingress-egress point pairs (column 6, lines 40 to 49). In the method depicted by figure 4 of Kodialam, each potential path is tested and, if the test is passed, the path for the new LSP is provided including links, service level etc (column 8, lines 8 to 26). Thus, it can be seen that Kodialam teaches the evaluation of a number of potential end to end paths for each NTP request based on an ingress-egress point pair.

Referring to figure 6 of Kodialam and Table 1 (column 11, lines 16 to 44), it can be seen that a comparison is being provided of a number of paths allocated in accordance with a prior art minimum number of hops algorithm and the constraint based method disclosed by Kodialam. It is very clear that every path evaluated for the comparison as set out in Table 1 is a complete end to end path between edge nodes. There is no disclosure or suggestion that the processing of an NTP request in accordance with either the prior art minimum hops algorithm or the constraint based method of Kodialam involves evaluating paths that are not end to end paths across the network. Thus, it is clear that, in Kodialam, an NTP request results in a path evaluation process whereby candidate paths to satisfy the request are defined as end to end paths comprising a series of concatenated links between adjacent

7

nodes starting with an edge node that services a source and ending with an end node servicing a destination.

Thus, there is no teaching or suggestion in Kodialam of defining and installing partial routes nor of forming an end to end path by concatenating two installed and defined partial routes, where each defined and installed partial route comprises at least two LSPs with pre-installed cross-connections. The present invention uses source based routing to effect control of the pre-installed cross-connections to link the partial routes together, and not just their constituent LSPs alone as is the case in Kodialam.

In justifying his 35 U.S.C. 102 rejection of claim 1, for example, the Examiner refers to figure 6 of Kodialam as showing a first route comprising N1-N4-N9-N10 and a second route N10-N11-N13 and to Table 1 and suggests that the concatenation of these two routes to form an end to end route across the network anticipates the method of claim 1. The applicant is entitled to ask where in Kodialam does it teach that route N1-N4-N9-N10 is separately defined and installed from the second route N10-N11-N13 prior to receipt of a request as is implicit in claim 1 of the present invention and that, in response to receipt of said request, these two partial routes are then concatenated to form an end to end path? No such teaching or suggestion exists since the arbitrarily selected first and second routes identified by the Examiner do not exist prior to an NTP request being received and never exist as such since the mechanics of forming a path in the system of Kodialam results in a path being formed as a serial concatenation of links between adjacent nodes starting at a source edge node and ending with a destination edge node.

Since all of the Examiner's various rejections of the claims are predicated on the misconstruction of the teaching of Kodialam then such rejections cannot be sustained. Also, since the issuance of the present office action as a final action also results from the misconstruction of the teaching of Kodialam, the finality of the office action should be withdrawn.

The present invention makes a useful contribution to the art since it enables an end to end path or route to be established across a label switched packet network through the concatenation of only two defined and (pre-)installed partial routes which makes more efficient use of label stacks to route packets over the network.

Favorable reconsideration of the claims is therefore requested.

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Respectfully submitted,
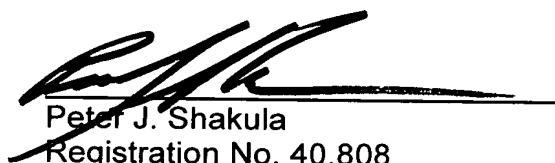
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9